WHAT IS CLAIMED IS:

1. A multi-layer film of film-forming polymers comprising a cover layer, at least one layer containing an active substance, and an adherent layer, wherein the active substance-containing layer comprises hydrophilic polymers crosslinked *in situ*, and wherein at least one active substance-containing layer has a horizontal and/or vertical gradient as regards the active substance, or the active substance is concentrated in specific horizontal and/or vertical segments of the active substance-containing layer.

2. A multi-layer film according to claim 1, wherein the cover layer is comprised of hydrophilic polymers crosslinked *in situ*.

3. A multi-layer film according to claim 1, wherein the cover layer and the active substance-containing layer are each from 30 to 100 μm thick.

4. A multi-layer film according to claim 1, wherein said hydrophilic polymers are cellulose ethers crosslinked with a phenolic substance.

5. A multi-layer film according to claim 4, wherein said hydrophilic polymers are selected from the group consisting of hydroxyethyl-cellulose, methylcellulose and methylhydroxypropylcellulose.

6. A multi-layer film according to claim 4, wherein said hydrophilic polymers are composed of methylhydroxypropylcellulose crosslinked with tannin.

7. A multi-layer film according to claim 1, wherein said hydrophilic polymers are anionic polymers.

8. A multi-layer film according to claim 7, wherein said hydrophilic polymers comprise anionic polymers selected from the group consisting of sodium carboxymethylcellulose, polyacrylates and carragenates, that have been crosslinked with inorganic ions or with polycations.

9. A multi-layer film according to claim 8, wherein said hydrophilic polymers comprise sodium alginate crosslinked with calcium ions or chitosan.

10. A multi-layer film according to claim 1, wherein the cover layer further comprises at least one auxiliary substance selected from the group consisting of colorants and flavoring agents.

11. A multi-layer film according to claim 1, wherein said adherent layer comprises methylhydroxypropylcellulose and polyacrylic acid.

12. A multi-layer film according to claim 1, wherein the film contains a plurality of active substances.

13. A multi-layer film according to claim 12, wherein each active substance-containing layer contains at least one active substance.

14. A multi-layer film according to claim 1, wherein the film contains at least one active substance selected from the group consisting of aromas, plant protection agents, pharmaceutically active agents, vitamins, nutrients, and fertilizers.

15. A method of transmucosally administering a medicament to an organism comprising applying a medicament-containing, multi-layer film according to claim 1, to a mucosal membrane of said organism.

16. A process for producing a multi-layer film according to claim 1, comprising applying a plurality of layers successively on a smooth surface, wherein each successive layer is formed by spraying respective partial layers of solutions containing the film-forming polymer, the crosslinking agent and at least one active substance on one another on said smooth surface followed by drying.

17. A process according to claim 16, wherein the cover layer and the at least one active substance-containing layer are each produced by simultaneously spraying a solution of film-forming polymer and the crosslinking agent on the surface.

18. A process according to claim 16, wherein the spraying is carried out using at least one single-component, two-component or three-component nozzle.

19. A process according to claim 16, wherein the at least one active substance sprayed on dissolved or emulsified or suspended in an aqueous solution of the crosslinking agent.

20. A process according to claim 16, wherein the solutions containing the film-forming polymer, the crosslinking agent and at least one active substance are sprayed onto a plate on top of one another by spray cones which overlap, and the plate is cyclically moved underneath the spray cones.

21. An apparatus for producing a multi-layer film according to claim 1, comprising at least one sprayer, a dryer, and at least one plate that is cyclically moved underneath the at least one sprayer.